

In re Patent Application of:

**DeSALVO ET AL.**

Serial No. 09/724,256

Filing Date: 11/28/2000

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**REMARKS**

Claims 1-31 remain in this application. Claims 3, 13, 25 and 31 have been amended.

Applicants thank the Examiner for the detailed study of the application and prior art. Claims 25 and 31 as set forth by the Examiner and Claims 3 and 13 are amended to correct inconsistencies in the claims.

Applicants acknowledge the allowance of Claims 21-24 and 26-30 and the indication of allowable subject matter to Claims 5 and 15 and 25 and 31.

Applicants also submit a 131 Declaration from the inventors that sets forth the details that prior to September 30, 1998, the effective date of cited U.S. Patent No. 6,384,948 to Williams et al., the inventors had conceived and reduced to practice the invention that is described and claimed in the above-identified patent application while working in the United States in the Palm Bay, Florida facility of Harris Corporation. They worked diligently on developing the claimed invention from the time of conception to reduction to practice. Later, after reduction to practice, which occurred before September 30, 1998, the inventors worked diligently to improve the invention and develop a commercially feasible optically amplified receiver of the claimed

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invention. Exhibit 1 are pages from a laboratory notebook showing evidence of conception, the development of the optically amplified receiver of the invention, and test results of a reduced to practice receiver of the invention.

Applicants also note the rejection of Claims 1-4, 6, 9-14, 16, 19 and 20 as obvious over U.S. Patent No. 5,517,351 to Hatakeyama in view of the cited U.S. Patent No. 6,384,948 to Williams et al. (hereinafter "Williams"). Applicants note that the Declaration under 37 C.F.R. 1.131 effectively removes Williams as a reference.

As to Hatakeyama, Applicants note that Hatakeyama is directed to an optical receiver that uses a pumping laser diode controlled by the peak value and mark-space ratio value of an amplified signal to prevent a detection failure of a received clock caused by breakdown of a receiver photodiode for optical noise. It uses a simple timing extraction circuit and discriminator to overcome the disadvantages of conventional optical receiving circuits with automatic gain control operation. Hatakeyama addresses the problem associated with underestimating a light level by the mark-space ratio fluctuation, which leads to excessive application of injection current to a pumping semiconductor laser. Hatakeyama applies an injection current free of the

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influence from fluctuations in the mark-space ratio without causing breakdown over the photodiode. The automatic gain control/level fixation circuit supplies an injection current to a pumping semiconductor laser for induction in connection with a peak value detection output signal and a mark-space ratio detection output signal.

The present claimed invention, on the other hand, is directed to solving a different problem with optical receivers in rack-mounted units that commonly used avalanche photodiodes and had a receiver sensitivity power penalty resulting from optical insertion loss of an optical demultiplexer. The present claimed invention optimizes the system and incorporates components into a single assembly as an optically amplified receiver, allowing increased transmission distances over currently available technology, while reducing the volume of valuable equipment-rack space, and providing effective thermal management.

Nowhere does Hatakeyama disclose or suggest the use of a bandpass filter to select any single channels and filter out noise. Hatakeyama also does not disclose or suggest the use of a PIN detector as in the present claimed invention.

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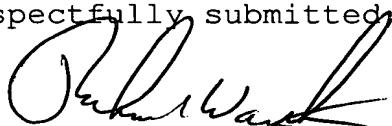
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It is evident that Hatakeyama is directed to a different problem to be solved and nowhere suggests the present claimed invention.

Although Vanoli may teach a wavelength division multiplexing system as argued by the Examiner, Vanoli is directed to a standard telecommunication system with a number of line amplifiers, splitter and receivers. Nowhere does Vanoli suggest the present claimed invention of an optically amplified receiver with the optical preamplifier, bandpass filter, PIN detector and amplifier circuit as claimed in the present application.

Applicants contend that the present case is in condition for allowance. If the Examiner has any questions or suggestions for placing this case in condition for allowance, the undersigned attorney would appreciate a telephone call.

Respectfully submitted,

  
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**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: **MAIL STOP NON-FEE AMENDMENT, COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450**, on this 11<sup>th</sup> day of November, 2003.

Juli Lalan